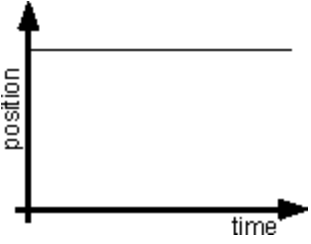
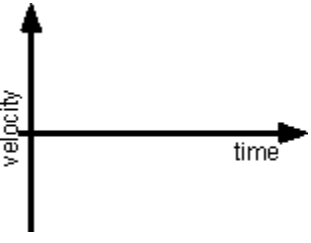
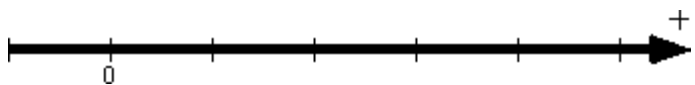


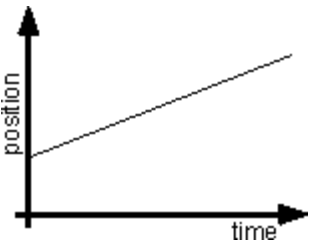
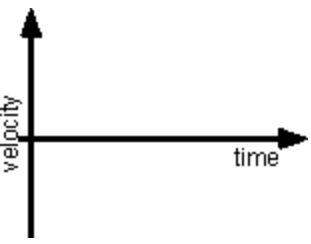
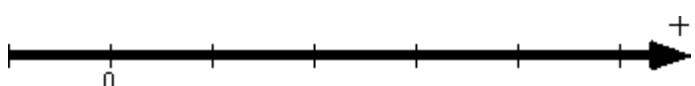
# Multiple Representations of Motion

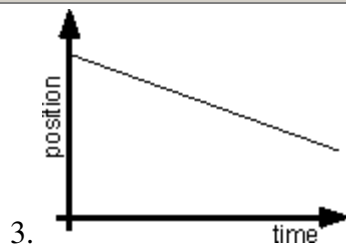
## Motion Detector Lab

Do the following for each of the situations below:

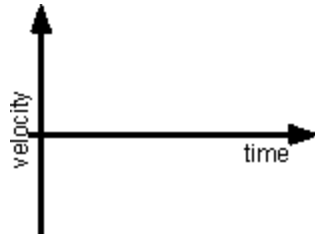
- Move, relative to the motion detector, so that you produce a position vs. time graph which closely approximates the graph shown.
- In the space provided, describe how you must move in order to produce the position vs. time graph shown in the space to the right of the velocity vs. time graph. Be sure to include each of the following in your description: starting position, direction moved, type of motion, relative speed.
- On the velocity vs. time axes, sketch the velocity vs. time graph which corresponds to the position vs. time graph shown.
- In the space provided, sketch the motion map that corresponds to the motion described in the position vs. time graph.

<p>1.</p>  <p style="text-align: center;">position</p> <p style="text-align: center;">time</p>	<p>Written Description:</p>
 <p style="text-align: center;">velocity</p> <p style="text-align: center;">time</p>	<p>Motion Map:</p> 

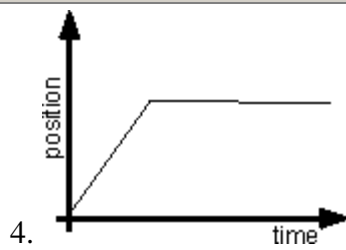
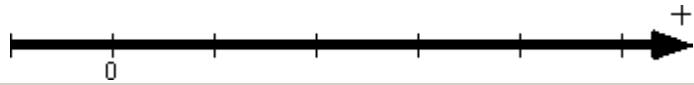
<p>2.</p>  <p style="text-align: center;">position</p> <p style="text-align: center;">time</p>	<p>Written Description:</p>
 <p style="text-align: center;">velocity</p> <p style="text-align: center;">time</p>	<p>Motion Map:</p> 



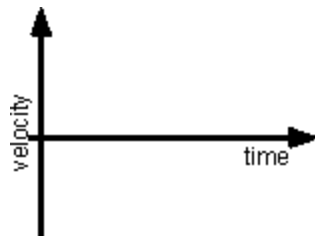
Written Description:



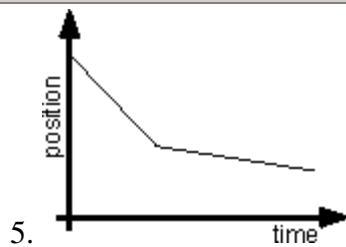
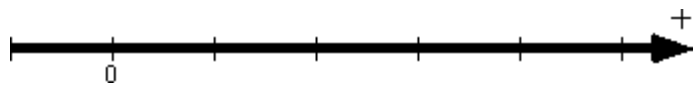
Motion Map:



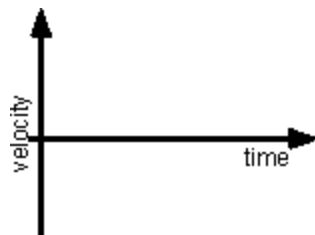
Written Description:



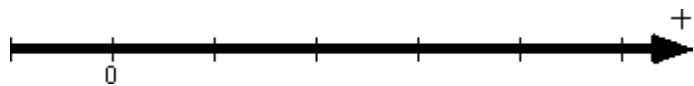
Motion Map:

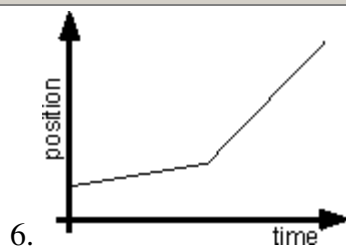


Written Description:

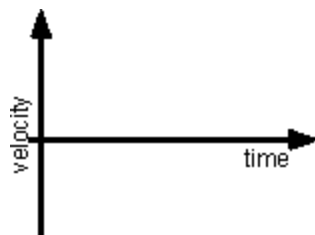


Motion Map:

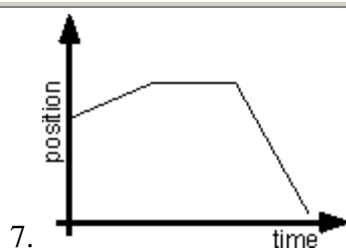
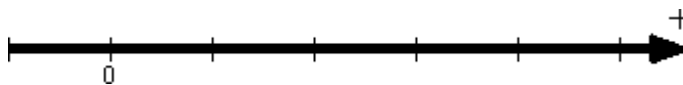




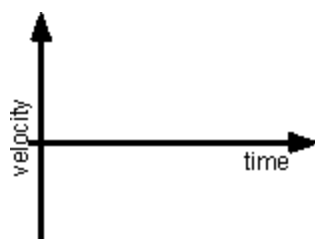
Written Description:



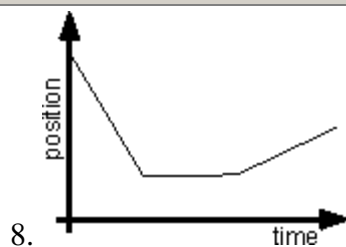
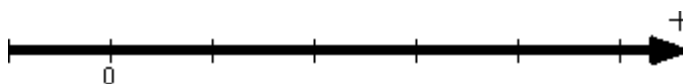
Motion Map:



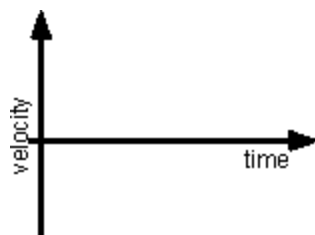
Written Description:



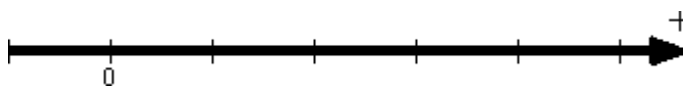
Motion Map:



Written Description:

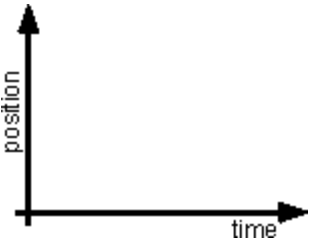


Motion Map:



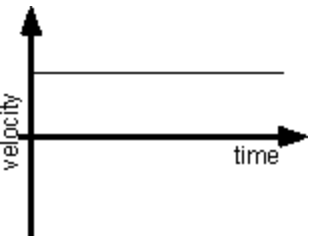
For the following, match the given velocity-time graph.

9.



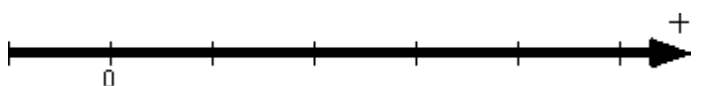
A position-time graph with 'position' on the vertical axis and 'time' on the horizontal axis. The graph shows a horizontal line at a constant positive position value.

Written Description:




A velocity-time graph with 'velocity' on the vertical axis and 'time' on the horizontal axis. The graph shows a horizontal line at a constant positive velocity value.

Motion Map:



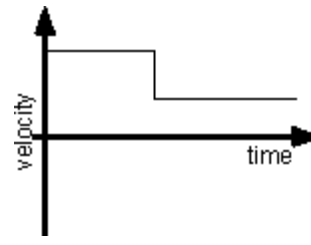
A horizontal number line with an arrow pointing to the right, labeled with a '+' sign. The origin is marked with '0'. There are six tick marks to the right of the origin.

10.



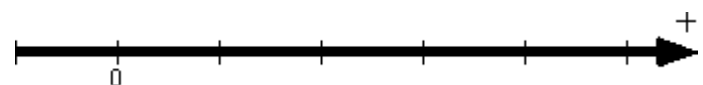
A position-time graph with 'position' on the vertical axis and 'time' on the horizontal axis. The graph shows a horizontal line at a constant positive position value.

Written Description:



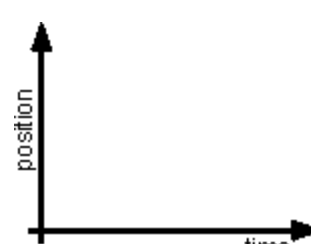
A velocity-time graph with 'velocity' on the vertical axis and 'time' on the horizontal axis. The graph shows a horizontal line at a constant positive velocity value for a short duration, followed by a horizontal line at a constant negative velocity value for a longer duration.

Motion Map:



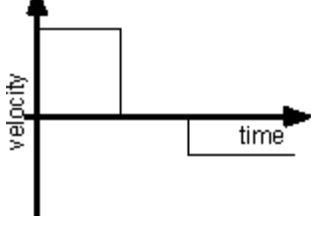
A horizontal number line with an arrow pointing to the right, labeled with a '+' sign. The origin is marked with '0'. There are six tick marks to the right of the origin.

11.



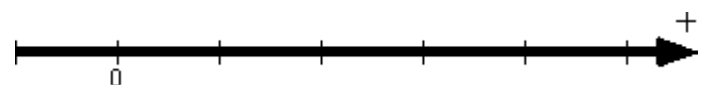
A position-time graph with 'position' on the vertical axis and 'time' on the horizontal axis. The graph shows a horizontal line at a constant positive position value.

Written Description:

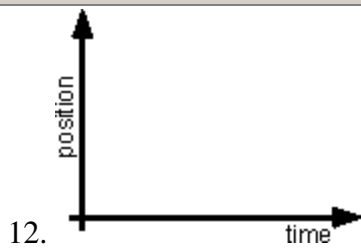


A velocity-time graph with 'velocity' on the vertical axis and 'time' on the horizontal axis. The graph shows a horizontal line at a constant positive velocity value for a short duration, followed by a horizontal line at a constant negative velocity value for a longer duration.

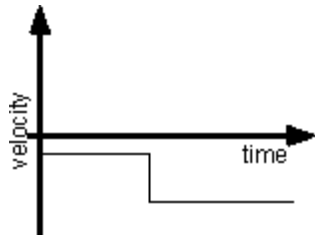
Motion Map:



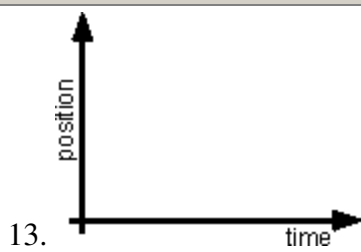
A horizontal number line with an arrow pointing to the right, labeled with a '+' sign. The origin is marked with '0'. There are six tick marks to the right of the origin.



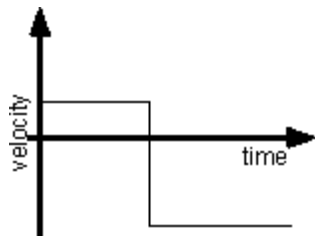
Written Description:



Motion Map:



Written Description:



Motion Map:

